ISPQ:

Methods and Experiences in Establishing Standards for Training; Establishment of Ongoing Training Programs

Village Power Sustainability Workshop, 6-7 December 2002

Why do we care about training?

- … Teach a man to fish and you feed him for a lifetime. (proverb)

- Those who do not learn from history are doomed to repeat it. (George Santayana)

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Why is training important?

- Training is only one of several critical infrastructure components necessary for a successful, sustainable industry:

  - Training
  - Quality Hardware
  - Finance
  - Dealer/Distribution Network

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Why is Quality Training Important?

- Credibility through Reliability
- Financing through Risk Analysis
- Workforce Development for Local, Sustainable Jobs
- Sustainability through Infrastructure rather than Projects Alone
- Not a Technology Problem!

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Why is Quality Training Important?

- News Item … September 2002
  San Jose Mercury News, California USA

  ## Solar System Causes Wildfire

  Investigators have traced the source of a 1300 hectare forest fire to a poorly installed solar electric system on a trailer in a remote area. In addition to burning large areas of forest, the fire destroyed 80 homes. Fortunately, no one was killed in the blaze.

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Why Accreditation?

- Consistent Quality, Safety, and Reliability
- Better Access to Financing, Insurance, and Markets
- Efficiency of Process (Cost and Time) Through Coordination and Consensus
- Mitigating Liability
- Professional Credibility and Recognition
- Portability and Reciprocity

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Why is Accreditation Important?

- Training without Accreditation provides no check on quality: Training wrong could be worse than no training at all
- Without an Accredited Training Infrastructure:
  - 1994 Australian study of PV in Thailand found 72% of systems failed
  - 2002 US study in Brazil found 70% of systems failed
  - 99% of streetlights in Indian program failed
- With similar results, a USD240 million program might lose USD 168 million to failure

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What is ISP?

- International Non-Profit, Incorporated in 1996, Offices in US and UK
- Standards Making and Standards Coordinating Body
- Third-Party Accrediting Body for Training Programs
- Specific to Renewable Energy, Energy Efficiency, and Distributed Generation

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What Does ISP Do?

- Accredit Renewable Energy Training Programs
- Maintain International Accreditation Committee and Standards
- Coordination with National Bodies for Developing a Training and Certification Framework
- Coordinate Technical Standards Committees

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Why ISP (or equivalent)?

- The financial community requested an objective third-party validation mechanism
- Special expertise in Renewables, Efficiency, and Distributed Generation
- Encourages Industry-Led Quality in advance of integration into the conventional vocational infrastructure

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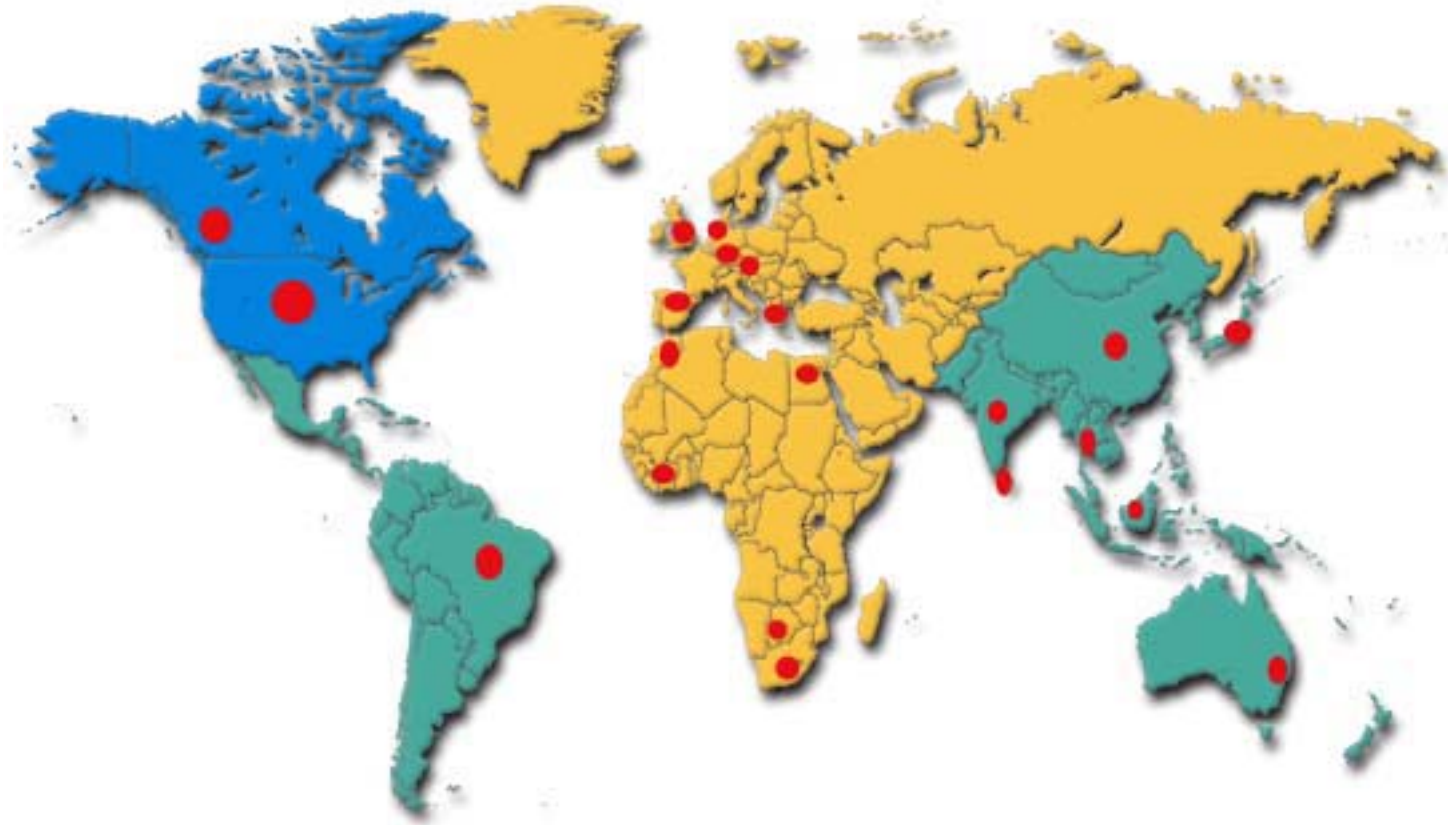
Where is ISP Working?



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Methods and Experiences in Establishing Standards for Training

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Establishing Standards for Training

- Put together national technical committees to carry out a task analysis that is relevant to the local market
- Assemble a representative stakeholder/actor group to best define the technical and market issues

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How ISP Assists in Establishing Standards

- Assist in viewing the opportunity not as “solar” or “renewable” but as market and workforce development
- Provide information on experiences in other economies
- Share core standards and assist in adapting them for national needs
- Act as an objective, third-party auditor

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What Types of Standards are We Considering?

- Training Capability Requirements (ISPQ DIS 01021: General Requirements for Trainers and Training Programs offering Renewable, Efficiency, and Distributed Generation Training)
- Task Analysis: content requirements; core analysis of knowledge, skills, and abilities competencies; specific to job functions and technology/service

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What Levels of Qualification do these Standards Cover?

- Certified Instructor
- Certified Master Trainer
- Accredited Training Program
- Accredited Continuing Education

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Establishing Ongoing Training Programs

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Linking with National Vocational/ Technical Training Infrastructure

- Industry must define its own standards and guides for quality and competency
- Training and competencies must align with existing national technical training infrastructure: no need to re-invent
- Workforce development is the goal

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Industry's Part

- Industry must remain engaged in and support the process of quality training
- Industry must offer continuing expertise as the technology and markets evolve
- Industry must participate in the technical committees
- Industry must not isolate itself from the existing national technical training

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What Other Stakeholders Must Do

- Finance/Development must support training and workforce development
- All parties must insist on infrastructure development rather than isolated projects
- Government should identify ways to encourage training and quality

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Experiences in Establishing Training and Qualification

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Programs Around the World

- Sri Lanka: >400 technicians trained in 15 months through 1 Master Trainer and 20 instructors
- Europe: 6 countries participating
- US: national certification under development
- Morocco training accredited

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China is the World Leader

- Song Dian Dao Xiang and Brightness Programs
- Certified Master Trainers (JKD)
- Accredited Training Program for PV SHS (JKD)
- Qualified Program Auditors (JKD)
- Technical Committees for SHS and Village Hybrid Systems
- National Call for Improving Vocational Training and aligning with Int'l Standards

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China has Taken the Lead

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Lessons Learned

- Teach a man to fish
- Learn from history
- Not a technology problem
- Infrastructure is critical for sustainability
- Link with existing training infrastructure
- Global Standards, Local Quality

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Summary & Discussion

- ISP Accredits Training Programs based on the Policies & Procedures and Standards set by of Accreditation Committee
- ISP Works with Country Programs but is not a Certifying Body for Practitioners
- Assists in Integrating RE Training with National Workforce Development Efforts

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